

REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 1, 4-6, 15-28, 31, 32, 34, and 35 are pending in this application. Claims 5, 6, 16, and 19-28 stand withdrawn from consideration. Claims 29, 30, and 33 are herein canceled without prejudice. Claims 30, 33, and 34 were rejected under 35 U.S.C. §112, second paragraph. Claims 1, 4, 15, 17, 18, and 29-35 were rejected under 35 U.S.C. §103(a) as unpatentable over U.S. patent 7,321,353 to Tsuda et al. (herein “Tsuda”) in view of U.S. patent 6,105,045 to Kurabayashi et al. (herein “Kurabayashi”) and further in view of U.S. patent 7,133,013 to Kamezaki et al. (herein “Kamezaki”). Those rejections are traversed by the present response as now discussed.

The claims are herein amended to clarify certain features therein. Independent claim 1 now additionally recites:

weighting image data with respect to a color of respective of the plurality of pixels, said image data to be impressed to the respective pixels of the EL display apparatus,

Independent claim 4 recites a similar features. The above-noted features are believed to be clear from the original specification, see for example page 322, line 21 to page 322, line 14.

Independent claim 1 also now further recites:

when results of said aggregating of said weighted image data are larger than a predetermined value,

suppressing an amount of current that flows in the EL element by shortening a time period to pass the current during one frame period, displaying a non-display area on the display screen of the EL display apparatus[.]

The above-noted features are believed to be clear from the original specification, see for example page 328, lines 13-19, Figure 13 showing the non-display area 52a, and Figure 16 showing the non-display areas 52a-52d.

Independent claim 1 also clarifies the shifting of the non-display area on the screen is “synchronizing with said one frame period”. That subject matter is believed to be clear from the original specification, see for example page 77, lines 5-10, and Figures 13, 19, and 24.

Independent claim 4 also now further recites:

the gate driver circuit drives the gate signal line according to the start pulse signal so as to generate a non-display area on the display screen and shift the non-display area in a scanning direction of the gate driver circuit.

Those features are believed to be clear from the original specification, see for example page 348, lines 15-26.

Dependent claim 15 now clarifies the non-display area shifted in a “scanning direction of the gate drive circuit”, which is believed to be supported by the original specification at page 360, line 23 to page 361, line 7. Dependent claim 34 now further recites “an area of the element of one color of the plurality of colors is different from an area of an element of the other colors”, which is believed to be clear from the original specification for example at page 69, lines 7-9.

Addressing first the rejection of claims 30, 33, and 34 under 35 U.S.C. §112, second paragraph, claims 30 and 33 are herein canceled without prejudice and claim 34 is amended to clarify the language therein.

Addressing now the above-noted prior art rejection of the claims over Tsuda in view Kurabayashi and further in view of Kamezaki, the claims as written are believed to distinguish over that applied art.

With respect to each of amended independent claims 1 and 4, the features clarified in those claims are believed to clearly distinguish over the applied art.

According to features recited in independent claims 1 and 4, by aggregating image data weighted with respect to a color of respective of the plurality of pixels, a total current consumption of EL elements of a display screen can be calculated. Therefore, when results

of the aggregating of the weighted image data are larger than a predetermined value, an amount of current that flows in the EL element can be suppressed by shortening a time period to pass the current during one frame period, for example by widening a total width of a non-display area.

With the features clarified in amended independent claims 1 and 4, it becomes possible to suppress a maximum electric power consumption of the EL display apparatus period that provides the benefit of making the EL display apparatus to be longer lived or to miniaturize the power supply thereof. Further, with such a structure a high movie display performance and a high quality image display can be realized with regard to contrast performance.

In contrast to the features as clarified in the claims as currently written, the primary reference to Tsuda discloses a liquid crystal display panel that includes auxiliary capacitive electrode pads for use in forming auxiliary capacitance and an auxiliary capacitive line so as not to generate a capacitive bond with the scanning line, and also the liquid crystal panel being driven at a frame rate of 30 Hz.

Applicant respectfully submits Tsuda does not disclose or suggest the features clarified in the claims as currently written with respect to weighting of the image data and suppressing an amount of current that flows in the EL element by shortening a time period to pass the current during one frame period when results of the aggregating of the weighting image are larger than a predetermined value, and then further shifting the non-display area and the display screen synchronizing with the one frame period as clarified in independent claim 1. With respect to claim 4 Tsuda again does not disclose the weighting of the image data as clarified therein, and driving the gate signal line according to the start pulse so as to generate a non-display area and the display screen and shift the non-display area in the scanning direction of a gate driver circuit.

Further, applicant submits no disclosures in Kurabayashi or Kamezaki cure the deficiencies in Tsuda.

Kurabayashi is directed to an image processing apparatus and discloses data for use in specifying an image to be registered and data indicative of processing contents to be executed are listed in a list structure and contents are processed based on the results of an aggregate area.

Applicant submits the technical field of the device of Kurabayashi is significantly different from that in the claimed invention as Kurabayashi is not even directed to a drive method of an EL display apparatus. Further, Kurabayashi at least does not disclose or suggest the clarified claim feature of “weighting image data with respect to a color of respective of the plurality of pixels, said image data to be impressed to the respective pixels of the EL display apparatus”, and then subsequently “aggregating said weighted image data”.

Kamezaki also does not cure the deficiencies of Tsuda in view of Kurabayashi. Kamezaki is directed to a liquid crystal display panel, and in that respect is also not even directed to an EL display panel. The display device of Kamezaki has a function of a partial display and a plurality of pixel lines are selected all together in the partial display part. Applicant submits such a device in Kamezaki is directed to a different technical field than the claimed invention and is not related to a drive method of an EL display apparatus. Further, the “non-display area” in Kamezaki is a fixed area that is displayed on a specific position of a display panel. Thereby, the width of a “non-display area” in Kamezaki cannot change and cannot be “shifted on a display screen synchronizing with one frame period” as recited in claim 1, and cannot be “shifted in the scanning direction of a gate driver circuit” as recited in claim 4.

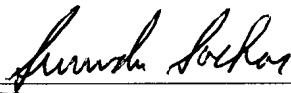
Thereby, applicant submits the disclosures in Kamezaki do not even cure recognized deficiencies in Tsuda and Kurabayashi.

In view of the foregoing comments applicant respectfully submits each of amended independent claims 1 and 4 as currently written positively recite features neither taught nor suggested by Tsuda in view of Kurabayashi and further in view of Kamezaki, and thus amended independent claims 1 and 4, and accordingly the claims dependent therefrom, distinguish over that applied art.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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